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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,521	09/30/2005	Takashi Nakamura	279038US2PCT	6187

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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

TRAN, MY CHAU T

ART UNIT	PAPER NUMBER
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2629

NOTIFICATION DATE	DELIVERY MODE
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08/22/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/551,521	Applicant(s) NAKAMURA ET AL.	
	Examiner MY-CHAU T. TRAN	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 1-21 and 30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22-24 and 29 is/are rejected.
- 7) ☒ Claim(s) 25-28 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>See Office Action</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Application and Claims Status

1. Applicant's response filed 05/13/2008 are acknowledged and entered.
 2. Claims 1-30 were pending. No claims were amended, added and/or cancelled.
- Therefore, claims 1-30 are currently pending.

Election/Restrictions

3. Applicant's election without traverse of Group I (claims 22-29) in the reply filed on 05/13/2008 is acknowledged.
4. Claims 1-21 and 30 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to ***nonelected inventions***, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 05/13/2008.
5. Consequently, claims 22-29 are under consideration in this Office Action.

Priority

6. Receipt is acknowledged of papers i.e. Japanese Patent Application No. 2003-096479, filed March 31, 2003, and Japanese Patent Application No. 2004-003066, filed January 08, 2004, submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

7. The information disclosure statements (IDS) filed on 12/29/2005, 01/18/2007, and 07/08/2008 have been reviewed, and the references that have been considered are initialed as recorded in PTO-1449 forms.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 22-24 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Umeya (US Patent 6,028,581) in view of Torihata et al. (US Patent 4,794,634) and Okumura et al. (US Patent 5,739,804).

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For **claims 22-24**, Umeya discloses a liquid crystal display (LCD) having an input function wherein the inputs include image inputs and inputs from a pen and a human touch (see e.g. Abstract; col. 1, lines 6-9; col. 2, line 55 thru col. 3, line 6). The LCD is an active matrix of pixel cells wherein each pixel cell comprises two thin film transistors (TFTs) (ref. #502 and #504) in which one TFT (ref. #502) (refers to instant claimed display elements) is for the display portion of the pixel and the other TFT (ref. #504) is for the sensor portion of the pixel (see e.g. col. 5, line 53 thru col. 6, line 61; fig. 5). As illustrated by figure 5, each TFT (ref. #502 and #504) are formed at the intersection between a gate control line (ref. #510 and 530) (refers to instant claimed scanning lines and instant claim 24) and a source control line (ref. #512 and 532) (refers to instant claimed signal lines and instant claim 23) (see e.g. col. 6, lines 6-28 and 44-62). The sensor portion of the pixel comprises an input sensor (ref. #534) (refers to instant claimed a pointer detection section) that includes a photodiode (refers to instant claimed image pickup unit) that causes input such as image inputs and/or inputs from a pen and a human touch to be sensed by the liquid crystal display (see e.g. col. 6, lines 29-62; fig. 5).

The teachings of Umeya differ from the presently claimed invention as follows:

For **claim 22**, Umeya fails to disclose that an amplifier circuits connected to the image pickup unit.

For **claim 29**, Umeya fails to disclose that the image data is subjected to image processing.

However, Torihata et al. teach the limitations that are deficient in Umeya as follows:

For **claims 22 and 29**, Torihata et al. disclose a display having an input function (see e.g. Abstract; col. 1, lines 8-10; col. 1, lines 35-55). The display is a planar matrix liquid crystal

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display (see e.g. col. 3, lines 34-44). The input function comprises a position sensitive photodetector that detect the position inputted by the pen (see e.g. col. 2, lines 20-39; col. 3, line 59 thru col. 4, line 15; fig. 6). The signals detected by the photodetector are processed to provide an image to be display (see e.g. col. 4, lines 7 thru col. 5, lines 33).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to disclose that an amplifier circuits connected to the image pickup unit and that the image data is subjected to image processing as taught by Torihata et al. in the device of Umeya. One of ordinary skill in the art would have been motivated to disclose that an amplifier circuits connected to the image pickup unit and that the image data is subjected to image processing in the device of Umeya for the advantage of providing a method of processing the image data detected by the image pickup unit to be display (Torihata: col. 4, lines 7 thru col. 5, lines 33). Additionally, both Umeya and Torihata et al. disclose a photodetector as position detecting device (Umeya: col. 6, lines 29-62; Torihata: col. 3, line 59 thru col. 4, line 15). Furthermore, one of ordinary skill in the art would have a reasonable expectation of success in the combination of Umeya and Torihata et al. because the addition of an amplifier circuits and that the image data is subjected to image processing does not alter the function of the device of Umeya, i.e. a LCD with an input function.

The teachings of Umeya differ from the presently claimed invention as follows:

For *claim 22*, Umeya fails to disclose that the D/A conversion circuit is connected to the signal lines.

However, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to disclose that the D/A conversion circuit is connected to the signal

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lines in the device of Umeya since it art recognized that the drive circuit of an active matrix liquid crystal display include a D/A conversion circuit as evident by Okumura et al. (see col. 2, lines 5-16). Furthermore, one of ordinary skill in the art would have a reasonable expectation of success in the combination of Umeya and Okumura et al. because the addition of the D/A conversion circuit that is connected to the signal lines does not alter the function of the device of Umeya, i.e. a LCD with an input function.

Therefore, the combine teachings of Umeya, Torihata et al., and Okumura et al. do render the device of the instant claims *prima facie* obvious.

Allowable Subject Matter

11. Claims 25-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MY-CHAU T. TRAN whose telephone number is (571)272-0810. The examiner can normally be reached on Monday: 8:00-2:30; Tuesday-Thursday: 7:30-5:00; Friday: 8:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard A. Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MY-CHAU T. TRAN/
Primary Examiner, Art Unit 2629

August 20, 2008